

Atty. Docket No.: 012.P59029
Serial No.: 10/779,322

Amendments to the Claims:

This listing of claims will replace all prior version, and listings, of claims in the application. Where claims have been amended and/or canceled, such amendments and/or cancellations are done without prejudice and/or waiver and/or disclaimer to the claimed and/or disclosed subject matter, and the applicant and/or assignee reserves the right to claim this subject matter and/or other disclosed subject matter in a continuing application.

Listing of Claims:

1. (Currently amended): A method for amplifying a signal comprising ~~the steps of~~:

[[a)] decomposing a signal into a plurality of near-constant envelope signals;

[[b)] producing a plurality of control signals, each control signal corresponding to the magnitude of a respective near-constant envelope signal;

[[c)] amplifying each near-constant envelope signal in inverse proportion to its corresponding control signal;

[[d)] combining the plurality of inversely amplified near-constant envelope signals to produce an amplified output signal.

2. (Original): The method of claim 1 wherein decomposing the signal is accomplished through LINC signal decomposition.

3. (Original): The method of claim 1 wherein combining the signals is accomplished using a Chireix style amplitude combiner.

Atty. Docket No.: 012.P59029
Serial No.: 10/779,322

4. (Original): The method of claim 1 wherein combining the signals is accomplished using a conventional power combiner.

5. (Currently amended): The method of claim 1 wherein ~~step (e)~~ said amplifying is accomplished through the use of a variable-gain amplifier.

6. (Currently amended): A system for amplifying a signal comprising:

[[a]] means for decomposing a signal into a plurality of near-constant envelope signals;

[[a]] means for measuring the amplitude of each near-constant envelope signal to obtain a plurality of respective control signals;

~~a plurality of variable amplification~~ means for variable amplifying for each near-constant envelope signal;

[[a]] means for combining signals;

wherein the bias of each variable ~~amplification~~ amplifying means is capable of being adjusted to amplify each near-constant envelope signal in inverse proportion to its respective control signal to produce a corresponding amplified constant envelope signal; and

wherein the combining means ~~combines~~ is capable of combining the plurality of amplified constant envelope signals.

7. (Original): The system of claim 6 wherein the decomposing means is LINC signal decomposition.

Atty. Docket No.: 012.P59029
Serial No.: 10/779,322

8. (Original): The system of claim 6 wherein the combining means is a Chireix style amplitude combiner.

9. (Original): The system of claim 6 wherein the combining means is a conventional power combiner.

10. (Original): A device for amplifying a signal comprising:

a signal decomposer;

a plurality of amplified envelope detectors;

a plurality of adjustable gain amplifiers;

a combiner;

wherein the signal decomposer fragments a signal into a plurality of near-constant envelope signals, wherein each amplified envelope detector produces a control signal corresponding to a respective near-constant envelope signal,

wherein the gain of each adjustable gain amplifier is controlled by a respective control signal,

wherein each adjustable gain amplifier amplifies a respective near-constant envelope signal with gain inversely proportionate to its respective control signal, thereby producing an amplified constant envelope signal;

wherein the combiner combines the plurality of amplified constant envelope signals.

11. (Original): The device of claim 10 wherein the signal decomposer is a LINC signal decomposer.

Atty. Docket No.: 012.P59029
Serial No.: 10/779,322

12. (Original): The device of claim 10 wherein the combiner is a Chireix style amplitude combiner.

13. (Original): The device of claim 10 wherein the combiner is a conventional power combiner.

14. (Currently amended): A method for producing an amplified signal, comprising ~~the steps of:~~

decomposing a signal into a plurality of near-constant envelope signals;

obtaining a first control signal proportionate to the envelope of a first near-constant envelope signal;

inputting the first near-constant envelope signal into a first adjustable gain amplifier; obtaining a second control signal proportionate to the envelope of a second near-constant envelope signal;

inputting the second near-constant envelope signal into a second adjustable gain amplifier;

adjusting the bias of the each adjustable gain amplifier using a respective control signal, thereby producing a plurality of amplified constant envelope signals amplified in inverse proportion to a corresponding control signal;

combining the plurality of amplified constant envelope signals.

15. (Original): The method of claim 14 wherein decomposing the signal is accomplished through LINC signal decomposition.

Atty. Docket No.: 012.P59029
Serial No.: 10/779,322

16. (Original): The method of claim 14 wherein combining the signals is accomplished using a Chireix style amplitude combiner.

17. (Original): The method of claim 14 wherein combining the signals is accomplished using a conventional power combiner.

18. (Currently amended): A device for amplifying a signal comprising:

a signal decomposer having an input terminal and a plurality of output terminals;

a plurality of adjustable gain amplifiers, each adjustable gain amplifier having an input terminal, a control terminal, and an output terminal, ~~whereby~~ wherein its input terminal is in electrical communication with a respective output terminal of the signal decomposer;

a plurality of envelope detectors, each envelope detector having an input terminal and an output terminal, wherein its input terminal is in electrical communication with an output terminal of a respective adjustable gain amplifier;

a plurality of amplifiers, each amplifier having an input terminal in electrical communication with a respective envelope detector output terminal, and an output terminal in electrical communication with the control terminal of the respective adjustable gain amplifier;

wherein the adjustable gain amplifiers are capable of amplifying the outputs of the envelope detectors in inverse proportion to a control signal received from the signal decomposer at the control terminals;

a combiner having a plurality of input terminals and an output terminal, wherein each input terminal is in electrical communication with the output terminal of a respective adjustable gain amplifier.

Atty. Docket No.: 012.P59029
Serial No.: 10/779,322

19. (Original): The device of claim 18 wherein the signal decomposer is a LINC signal decomposer.

20. (Original): The device of claim 18 wherein the combiner is a Chireix style amplitude combiner.

21. (Original): The device of claim 18 wherein the combiner is a conventional power combiner.

22. (Currently amended): A device for amplifying a signal comprising:

a signal decomposer having an input terminal and a plurality of output terminals;

a plurality of envelope detectors, each envelope detector having an input terminal and an output terminal, wherein the input terminal of the envelope detector is in electrical communication with a respective output terminal of the signal decomposer;

a plurality of envelope signal amplifiers, each envelope signal amplifier having an input terminal and an output terminal, wherein its input terminal is in electrical communication with the output terminal of a respective envelope detector;

a plurality of adjustable gain amplifiers, each adjustable gain amplifier having an input terminal, a control terminal, and an output terminal, wherein its control terminal is in electrical communication with the output terminal of a respective envelope signal amplifier, and ~~whereby~~ wherein its input terminal is in electrical communication with a respective output terminal of the signal decomposer;

Atty. Docket No.: 012.P59029
Serial No.: 10/779,322

wherein the adjustable gain amplifiers are capable of amplifying the outputs of the signal decomposer in inverse proportion to a control signal received from envelope signal detectors;

a combiner having a plurality of input terminals and an output terminal, wherein each input terminal is in electrical communication with the output terminal of a respective adjustable gain amplifier.

23. (Original): The device of claim 22 wherein the signal decomposer is a LINC signal decomposer.

24. (Original): The device of claim 22 wherein the combiner is a Chireix style amplitude combiner.

25. (Original): The device of claim 22 wherein the combiner is a conventional power combiner.